

The New Jersey Coal Company has had a small fan 10' 0" dia built to ventilate the workings on the Red Ash seam. It has greatly improved the ventilation of said mine.

The Lehigh Coal and Navigation Company has had a large fan 24' 0" dia erected at the Washington colliery, near Plymouth. This fan ventilates the workings on the west side of the slope, two lifts, and the whole of the workings in the Nottingham shaft. I have not yet learned what amount of work this fan is able to do, as it has not yet been fully tested. There are about 85,000 or 40,000 cubic feet of air circulated through the shaft workings, and about 18,000 or 20,000 cubic feet for the slope west side.

The workings in the slope tunnel are being well ventilated by another fan 15' 0" dia.

The Susquehanna Coal Company has had the following fans erected: At No. 3 slope, old Harvey mine, West Nanticoke, one fan 17' 0" dia, which exhausts about 45,000 cubic feet of air per minute, and is capable of much more when required.

At *No. 3 or Grand Tunnel* one fan was taken from the old M'Farlane shaft, and placed upon the side of the mountain near the outcrop of the seam, to ventilate the workings of the back basin. This fan is 15' 0" dia, and does very well when being run to an ordinary speed, say 75 revolutions; but there has been some difficulty in getting a sufficient quantity of water to make steam at times, hence the fan has not had a fair trial, although very much needed at times.

The Riverside Coal Company has had a double fan built at the Enterprise shaft. This fan is built different to any other in this district, being two distinct fans, each 15' 0" dia, with the usual proportions, their shafts being so arranged as to allow of their being coupled or uncoupled at pleasure. Hence these fans can be run together, or either may be run independent of the other, allowing, if need, ample time to repair the one while the other keeps the mine clear of gas. When they were run together at 111 revolutions per minute, they discharged 69,600 cubic feet per minute, with a water gauge of 1.8 of an inch; a very heavy drag area, $48 \times \text{velocity } 1,450 = 69,600$, no allowance for friction of the instrument.

NEW SHAFTS COMPLETED SINCE MY LAST REPORT.

Waterman & Beaver's No. 2 shaft, located north-east of their old shaft, near Kingston, Pa. Coals have been hoisted from this shaft for several months past, which were sent through their new breaker.

Luzerne Coal and Iron Company's new shaft, near West Pittston.—This shaft has been completed, and coals are being hoisted from the opening. They are now driving so as to connect the new and the old shaft. The water having been taken out of the said old shaft, an opening between the two will be completed early in the next year, the driving being done at present from both sides.

Northern Coal and Iron Company's No. 3 shaft, near Plymouth.—It has been completed, but no coals have as yet been shipped therefrom. A new shaft is being sunk to form a second opening for the former at present.

D. and H. Cannal Company's Cunyngham shaft.—It has been completed to the Hillman seam, from which coals are now being hoisted from their gangway driven eastward. It is intended to drive for a second opening from the said gangway at some favorable point, yet to be decided upon, either to the surface or otherwise into Young's slope. One of the five separate compartments of this shaft is being occupied at present by a drilling apparatus for the purpose of testing the coal bearing strata below the present bottom of the shaft.

CLASSIFICATION OF FATAL AND NON-FATAL ACCIDENTS.

Causes of Accidents.	Killed or fatally injured.	Severely injured.
By explosions of fire-damp,	7	33
By falls of roof and coal,	44	68
By falling down shafts,	2	.
Crushed and run over by mine-cars,	7	59
By explosions of powder and blasts,	4	23
By miscellaneous causes underground,	6	27
By miscellaneous causes on surface,	7	23
Totals,	77	233

Number of widows, 46; orphans, 182.

The Collieries of the Fourth District.

During the year 1894 there were forty-three breakers and sixty-six openings at work more or less time, mining and preparing coal for market in the Fourth Anthracite district. An average of 46,789 tons per day worked was produced, making a total production of 7,162,961 tons in an average work of 153.1 days.

The collieries in operation less than 153.1 days were those of the Lehigh and Wilkes-Barre Coal Company. The No. 3 colliery of the Delaware and Hudson Canal Company, which, after working 153 days, was destroyed by fire on the evening of November 15, and remained idle the remainder of the year. The **No. 3 colliery** of the Susquehanna Coal Company, where the production is not sufficient to keep the breaker working all day owing to the partial exhaustion of the mine. The Gaylord colliery of the Kingston Coal Company, several weeks' idleness caused by the disastrous cave of February 13th. The collieries of the Lehigh Valley Coal Company, the Red Ash Coal Company, the Parrish Coal Company, the Maffet colliery of the Hanover Coal Company, and the Warrior Run colliery of Mr. A. J. Davis.

The Lee colliery of the Newport Coal Company did not work more than 100 days. It was suspended on August 25th, and since then has passed into the possession of another company. The Buttonwood colliery of the Parrish Coal Company is an old mine enlarged and reopened. It was lying idle since 1866. The shaft was enlarged and sunk to a deeper seam and a new breaker was erected. It began shipping coal in September, 1894, and worked 50 days until the end of the year.